



CALIFORNIA
ENERGY
COMMISSION

2011 Emerging Technology Demonstration Grant Program (ETDG II)

**Solicitation Number
PON-11-501**

**Subject Area: PIER Industrial,
Agriculture & Water Energy
Efficiency RD&D program**

**APPLICATION
MANUAL**

August 2011



Edmund G. Brown Jr., Governor

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GRANT SOLICITATION AND APPLICATION PACKAGE

Public Interest Energy Research (PIER) Program

Industrial, Agriculture and Water (IAW) Projects for Research, Development and Demonstration (RD&D)

Subject Area: Emerging Technology Demonstration Program

1. **Release Date:** August 26th, 2011
2. **Due Dates:** Abstract: October 6th, 2011 at 4:00 p.m.
Final Proposal: December 22nd, 2011 at 4:00 p.m.
3. **Purpose of Program:** The State of California has identified energy efficiency as a major strategy to reduce the state's energy use. Industrial, agriculture and water (IAW) customers consume a large portion of California's energy and can make a major contribution to the reduction of electricity and natural gas consumption by adopting new energy efficient technologies. This grant solicitation by the California Energy Commission (Energy Commission), through its Public Interest Energy Research (PIER) program, is soliciting both electricity and natural gas energy efficiency technologies in the areas of industrial, water and wastewater, data centers, and customer-side energy storage applications (see **Attachment F**).

This competitive grant solicitation seeks emerging technologies that are past the "proof-of-concept" stage and are ready to be demonstrated in an industrial setting. The demonstrations at industrial sites will be partially funded by the PIER program and the applicants will need to provide a minimum of 25% matching funds subject to certain conditions (see item 9 "Match Funding Requirements" and **Attachment H**). The objective is to produce proven technical and economic performance data from these demonstrations, which could make the technologies eligible to participate in the utilities' energy efficiency rebate programs and could facilitate the successful deployment of the technologies into the marketplace. Utility rebates can expedite customer acceptance and market development for the demonstrated technologies. After a successful demonstration at an industrial site, there must be plans for a 1-2 year time frame to commercially deploy the demonstrated technology. Applicants should address plans for gaining customer acceptance, market development, and deployment in their proposals.

4. Availability of Solicitation Documents and Information:

This solicitation and all supporting documents and forms can be found at <http://www.energy.ca.gov/contracts/index.html> under "Current Solicitations." Interested parties may also join the Energy Commission's listserv to receive notifications of any changes to this solicitation, new funding opportunities, and other daily updates (select the "Opportunity" list under "Commission General Lists" at <http://www.energy.ca.gov/listservers/index.html>).

For those parties without Internet access, copies of solicitation documents and information can be obtained by contacting:

Grants and Loans Office
California Energy Commission
1516 Ninth Street, MS-1
Sacramento, CA 95814
Telephone: (916) 654-5067

In addition, interested parties may request to be added to the Energy Commission's mailing notification list to receive changes made to this solicitation.

5. PIER and Industrial/Agriculture/Water Program Background:

In 1996, Governor Wilson signed into law Assembly Bill (AB) 1890 (Brulte, Chapter 854, Statutes of 1996) which provided authority for a fundamental restructuring of California's electric services industry. Among other things, AB 1890 added Section 381 of the Public Utilities Code, requiring that at least \$62.5 million be collected annually from investor-owned electric utility ratepayers for public interest energy research, development and demonstration (RD&D) efforts not adequately provided by competitive and regulated markets. The Energy Commission administers these funds through the PIER program. In August 2004, the California Public Utilities Commission (CPUC) issued Decision 04-08-010, which made funds available for public interest natural gas research and development projects. Public interest electric and natural gas research must conform to all of the following criteria:

- Advances science or technology
- Benefits California citizens
- Is not adequately addressed by competitive or regulated entities

In general, the research funded by the PIER program should improve energy efficiency, deploy renewable technologies, and/or otherwise provide tangible benefits to California's public. PIER's goal is to bring new energy services and products to the marketplace, leading to statewide environmental and economic benefits.

The PIER program portfolio includes:

1. Energy efficiency and demand response
2. Renewable energy resources and distributed generation resources, such as energy storage, smart grid, forecasting tools, and intermittency
3. Advancing clean generation technologies and improving the state's transmission infrastructure
4. Reducing the environmental impacts from energy generation, transmission, distribution and end use
5. Advancing transportation technologies and alternative fuels to reduce air pollution and greenhouse gas emissions
6. Carbon capture and sequestration research and demonstration

Significant energy issues in each of the PIER program areas were identified in the Commission's 2009 Integrated Energy Policy Report http://www.energy.ca.gov/2009_energy policy/. The program focus has been directed towards resolving these issues and meeting the program's overall objectives of improving affordability, reliability, health and safety, the economy, environmental outcomes, and consumer choices relevant to electricity supply and use in California.

The industrial, agriculture and water sectors in California use 30 percent of all electricity consumed annually in the state. These sectors are vital to California's economy and rely on an affordable, reliable and sustained supply of energy. Through RD&D, the PIER IAW program seeks to improve the energy efficiency of industrial processes, agricultural operations, and water and wastewater treatment plants. These sectors are also sensitive to the reliability and quality of electric power. Therefore in addition to improving energy efficiency, the program also strives to research, develop, and demonstrate technologies that help these sectors deal with power quality, supply and reliability issues if they directly improve energy efficiency or energy demand.

Due to California's substantial industrial base, the energy reliability of industry is critical not only for California's economy but for the national economy as well. The major industries - including food processing, cement, electronics, e-commerce, and petroleum extraction, refining and production - all depend on continued low-cost and reliable energy. PIER IAW-funded projects will focus on technology demonstration activities that will provide industrial, agricultural and water sectors with the ability to address energy efficiency and related pollution and greenhouse gas emissions. All of these sectors must keep operating costs low while maintaining environmentally clean and energy-efficient operations. In creating this solicitation, the PIER IAW program is focusing on emerging technologies to attain this difficult yet critical balance.

6. Eligible Projects:

The Energy Commission is seeking proposals for projects that target industrial, agricultural, or water energy efficiency areas for cumulative electricity, natural gas, or electricity demand reduction in California. Proposals should reflect a comprehensive understanding of the current state of technologies in the chosen area and must provide clear market connections for the proposed technology and potential benefits to electricity and/or natural gas ratepayers in California.

Projects must advance state-of-the-art technologies that are not adequately covered by the competitive market, in a novel manner not currently addressed by public or private entities. Projects must also demonstrate direct benefits to California ratepayers. For a list of active demonstration projects currently funded by the PIER IAW program, please see the list of projects in **Attachment O**. Direct benefits include energy and cost savings to California industries, manufacturing jobs in California, or reduction in water use or air pollution. Projects are ineligible if they are adequately funded by public or private entities, or involve technologies that are already commercially available.

Projects must be relevant to California's industries (see Targeted Technology Areas, **Attachment F**), have the potential to be economically feasible, and have the support of industry and/or utilities. The proposed technologies must have advanced past the "proof-of-concept" stage and be ready for demonstrations in industrial settings.

This solicitation's Targeted Technology Areas focus is on increasing energy efficiency associated with wastewater treatment facilities, commercial facilities that house data centers, facilities for post-harvest processing of agricultural products (food processing), facilities dealing with industrial process water and wastewater, and other industrial facilities. While farm production technologies are NOT eligible for funding, energy efficient irrigation technologies for farms and non-farm landscapes are eligible. Additionally, this solicitation can provide funding for projects demonstrating technologies for energy storage on the customer side of the meter associated with industrial applications. Please see **Attachment F** for more information on Targeted Technology Areas.

7. Eligible Applicants:

This is an open solicitation seeking proposals from public and private entities and individuals actively involved in electricity and natural gas efficiency RD&D. To be eligible, Applicants must **agree to use only the PIER Grant Terms and Conditions** for any agreement(s) resulting from this solicitation.

Applicants must propose a team with demonstrated capabilities to successfully complete technology development and demonstration projects.

While there is no requirement for Applicants to reside in California, the proposed demonstration site must be located in California and the project must directly benefit California's electric and/or natural gas ratepayers. Pursuant to AB 2267 (Fuentes, 2008), the PIER program must give a priority to California-based entities (CBEs) when making awards. To implement this requirement, the Energy Commission will award preference points if the proposal meets the criteria for a CBE as described in **Attachment I**.

California business entities as well as non-California business entities conducting intrastate business in California are required to register and be in good standing with the California Secretary of State in order to enter into a funding agreement with the Energy Commission. If not currently registered with the California Secretary of State, Applicants are encouraged to contact the Secretary of State's Office as soon as possible to avoid potential delays in beginning the project if successful under this solicitation. For more information, visit the California Secretary of State's website at www.sos.ca.gov.

8. Funding Information:

There is \$14 million of PIER Electricity and PIER Natural Gas funding available under this solicitation for grant awards. The funding breakdown is as follows: a) \$5.23 million in Electricity Funding and \$3.42 million in Natural Gas Funding from Fiscal Year

2010/2011, and b) \$2.55 million in Electricity Funding and \$2.8 million in Natural Gas Funding from Fiscal Year 2011/2012.

Applicants may request **no less than \$750,000** and **no more than \$2,000,000** per project. All project expenditures (match share and PIER funding) must be expended within the approved term of the grant agreement. The maximum project duration is 36 months and the maximum agreement term is 40 months, to allow for completion of all administrative project close-out activities.

Submitted proposals will be divided into four Targeted Technology Area categories, based on the Applicant's response to **Attachment A**. This solicitation's Targeted Technology Areas are: 1) water and wastewater, 2) data centers, 3) customer-side electricity storage, and 4) industrial energy efficiency. Please see **Attachment F** for more information on Targeted Technology Areas.

If the requested funds for projects having only natural gas benefits exceed the amount of PIER Natural Gas funds contained in this solicitation (currently \$6,220,000), or if the requested funds for projects having only electricity benefits exceed the amount of PIER Electricity funds contained in this solicitation (currently \$7,780,000), the Energy Commission may seek to augment the level of PIER Natural Gas and/or PIER Electricity funding. However, if no additional funds are available, the Energy Commission reserves the right to not fund natural gas projects once all PIER Natural Gas funds have been allocated to the highest ranked natural gas proposal(s) and to not fund electricity projects once all PIER Electricity funds have been allocated to the highest ranked electricity proposal(s). This may result in higher scoring natural gas projects not being funded while lower scoring electricity projects are funded, or vice versa. The Energy Commission reserves the right to make the final determination on how to allocate Electricity and Natural Gas funding.

9. Match Funding Requirements:

Match funding equivalent to **25%** of the requested PIER funding is required in cash. "Cash" is defined as equipment, materials, travel, information technology (IT) services, and subcontractor costs. Please note that "cash" does not include in-kind prime contractor labor. Match funds may come from the prime contractor, subcontractors, or the demonstration site. Note that funding awards already earned from other agencies for the proposed technologies count as "cash in hand" for the prime contractor and this funding is acceptable as match, since it is already in the prime contractor's possession. Under no circumstances will future, contingent awards from other entities count as match funds. Proposals having a greater proportion of match funds are more desirable, and these projects will be scored higher in **Attachment H** under "Match Funding (Cost)". Match funds must be used either before or concurrently with PIER grant funds. Although certainly allowable, in-kind prime contractor labor is not incentivized in **Attachment H**.

At the end of the project, grant recipients may continue to use equipment (items with a unit cost greater than \$5,000 and a useful life greater than one year) purchased with

PIER funds if the use is consistent with the intent of the original grant Agreement.

Purchasing equipment with match funding is encouraged because there are no disposition requirements for equipment purchased with match share funding.

10. Payment of Prevailing Wages:

Some projects submitted under this solicitation might be considered public works pursuant to the California Labor Code. If the project includes public work, prevailing wage is required. The California Department of Industrial Relations (DIR) has jurisdiction to decide whether a particular project is or is not a public work. If the proposed project involves construction, alteration, demolition, installation, repair or maintenance work, it probably will be considered by DIR to be a public work. Examples of the activities that would probably lead DIR to find that the project involves public works include: cement work, surveying, site preparation such as grading, electrical work such as wiring, and carpentry work. Certain workers are entitled to prevailing wage such as equipment operators, surveyors, carpenters, laborers, etc. However, some other trades are not entitled to prevailing wage, such as engineers and project superintendents.

Applicants are encouraged to determine if the proposed project involves public works as soon as possible. In order to determine if the proposed project involves public works, Applicants should contact DIR. If the Applicant has not received a determination from DIR that the project is not a public work, proposed project budgets must provide for the payment of prevailing wages. Please indicate whether the proposed budget includes prevailing wage.

If the proposed project is a public work, DIR maintains a list of covered trades and the applicable prevailing wage. The agreement will include the requirements for public works, such as paying prevailing wage, keeping payroll records, complying with working hour requirements, and apprenticeship obligations. See the Special Condition (**Attachment K**) regarding prevailing wage and the accompanying forms (**Attachments L and M**) for more information.

For detailed information about prevailing wage and the process to determine if the proposed project is a public work, see **Attachment M**.

11. California Environmental Quality Act (CEQA):

Some proposals selected for funding may meet the definition of a “project” for purposes of the California Environmental Quality Act (CEQA) (see Public Resources Code section 21000 et seq.) If this occurs, the Energy Commission’s Legal Staff will review the project to determine whether an exemption applies that would prevent further actions under CEQA. If no exemption applies, certain CEQA requirements (e.g., preparation of a negative declaration or environmental impact report) will have to be met prior to the Energy Commission approving the grant. The Applicant will need to pay the cost for these activities. Please refer to Title 20, California Code of Regulations, Chapter 6, Article 1, including section 2308.

12. Selection of Projects and Award Process:

This grant solicitation will follow a two-stage selection process. The first stage is a request for qualification consisting of a six (6) page maximum project abstract (not counting the cover page, letter of intent from the demonstration site, and letters of support from partners) which will be scored on a pass/fail basis (**Attachment G**). Applicants must organize their abstracts based on the instructions provided in **Attachment G**. Please see items 15 (Abstract Requirements) and 16 (Abstract Submission Instructions) for information on submitting abstracts.

If the proposal passes the first stage selection process, the Applicant will be invited to progress to the second stage involving submission of a complete formal proposal. The first stage will have ensured that only those teams proposing technologies that are technically suited to the industrial demonstration stage would submit the complete application. Stage 1 results will also have provided a preliminary assessment of the project's ability to secure an industrial demonstration site and plans for having an independent third party conduct the measurement and verification of the project's performance, economics, energy savings and other metrics of success.

The ability to procure an industrial demonstration site in California is an important requirement that must be met to participate in this grant solicitation and to receive funding for a submitted proposal (**Attachments G and H**). The Applicant must clearly address this issue in both stages of the project selection process. A letter of intent from a potential demonstration site is required for Stage 1, and a letter of commitment from a demonstration site is required for Stage 2. The Scope of Work that Applicants will submit as part of their Stage 2 proposals will also contain two mandatory project tasks to be performed at the start of the projects: confirming the demonstration site or else obtaining a replacement site, and confirming the Measurement & Verification vendor or else obtaining a replacement vendor (**Attachment C**).

Applicants are encouraged to have one or more backup demonstration sites because grant awards will not be made for at least 6-12 months after proposal submittal. If a site is lost, the Applicant is responsible for finding another suitable California site. The loss of a demonstration site will place the grant award in jeopardy. These situations will be handled on a case-by-case basis.

The following process will be utilized to recommend projects for funding:

1. During the initial screening (stage 1), a six (6) page maximum abstract will be submitted by Applicants. The required cover page, letter of intent from the demonstration site, and letter(s) of support from other partners do not count against this six-page limit. Abstracts will be scored on a Pass/Fail basis using the initial screening criteria described in **Attachment G**. The scoring committee may seek input from technical reviewers both internal and external to the Energy Commission when evaluating abstracts.

2. Only abstracts that successfully pass the initial screening stage will be invited to submit a formal proposal in stage 2. A scoring committee will: (1) screen the full formal proposals using the screening criteria in **Attachment H, Section 1**; and (2) score the full formal proposals using the scoring criteria in **Attachment H, Section 2**. Again, the scoring committee may seek input from technical reviewers both internal and external to the Energy Commission when evaluating proposals.
3. The scoring committee may conduct optional interviews for clarification purposes.
4. A minimum score of 700 (out of 1000) in Stage 2 is required to be eligible for funding. In addition, pursuant to AB 2267 (Fuentes, 2008), the Energy Commission's PIER Program must give priority to "California-based entities" (CBEs) when making awards. To implement this requirement, the Energy Commission will award preference points if the proposal meets the criteria for a CBE as described in **Attachment I**. CBE points are awarded only after the proposal achieves the 700 point minimum score.
5. Projects receiving a score of 700 or higher will be ranked according to their overall score within the Targeted Technology Areas shown below. Proposals will be placed in one of the categories based on the Applicant's response to **Attachment A**.
 - Water and wastewater
 - Data centers
 - Customer-side electricity storage
 - Industrial energy efficiency

The Energy Commission reserves the right to make the final determination on the categorization of all submitted proposals.

The scoring committee will submit the ranked list of proposals in each of the categories to the Energy Commission's Research, Development, and Demonstration (RD&D) Policy Committee. The RD&D Policy Committee will recommend how far down the ranked list of passing proposals to fund. It will also recommend how to shift any unallocated funds.

It is the desire of the PIER IAW program to fund at least one project in each Targeted Technology Area. Therefore, the first-ranked proposals in each of the four Targeted Technology Areas will be given first priority for funding. After these first four proposals, the scoring team will suggest the RD&D Policy Committee merge the ranked lists and award funding for the proposals in score order.

There is \$14 million of PIER Electricity and PIER Natural Gas funding for this solicitation. The Energy Commission reserves the right, at its sole

discretion, to allocate any additional funds among the categories in order to fund additional passing projects.

6. The Energy Commission reserves the right to negotiate with Applicants to modify the project scope, level of funding, or both.
7. If the Energy Commission is unable to successfully negotiate and execute a funding agreement with an Applicant, the Energy Commission, at its sole discretion, reserves the right to cancel the pending award and fund the next highest ranked eligible project in the same or another category.
8. A Notice of Proposed Awards (NOPA) will be released.
9. Projects recommended for funding will be scheduled and heard at an Energy Commission Business Meeting.

If approved at an Energy Commission Business Meeting:

10. Public agencies and non-profit organizations that receive funding under this solicitation must provide an authorizing resolution approved by their governing authority to enter into an Agreement with the Energy Commission.
11. A Grant Agreement, which includes **the PIER Grant Terms and Conditions***, will be sent to the Recipient(s) for review, approval, and signature. (Note: In Stage 1, Applicants will have provided an affirmation that they will accept the PIER Grant Terms and Conditions.)
12. Once returned to the Energy Commission, the Energy Commission will fully execute the Grant Agreement. Recipients are approved to begin the project only after full execution of the Grant Agreement.

* **The *PIER Grant Terms and Conditions* can be found at <http://www.energy.ca.gov/contracts> as part of this solicitation package. Please note, however, that the Energy Commission reserves the right to modify the terms and conditions prior to executing grant agreements.**

13. Schedule of Proposal and Award Process:

Release of Program Opportunity Notice	August 26 th , 2011
Proposal Workshop (via in person participation, teleconference, WebEx)	September 13 th , 2011
Deadline to Submit Questions	September 15 th , 2011
Post Questions and Answers to Website	Estimated September 26 th , 2011
Deadline to Submit 6 page Abstracts (Stage 1)	October 6th, 2011 by

	4:00 p.m.
Posting of Stage 1 Results	Estimated November 7 th , 2011
Deadline to Submit Proposals (Stage 2)	December 22nd, 2011 by 4:00 p.m.
Interview Applicants (if necessary)	Estimated January 3 rd -6 th , 2012
Post Notice of Proposed Awards (NOPA)	Estimated mid-January 2012
Approval of Awards at Energy Commission Business Meetings	Estimated June 2012

14. Proposal Workshop:

A proposal workshop will be held through in-person participation, WebEx, and conference call. Participation by prospective Applicants is optional. Please call (916) 651-1423 or refer to the Energy Commission's website at <http://www.energy.ca.gov/contracts> to confirm the date and time.

Public participation may be done in-person, via WebEx, and/or conference call.

Date: Tuesday September 13th, 2011
Time: 1:00 p.m.
Location: California Energy Commission
Hearing Room A, First Floor
1516 Ninth Street
Sacramento, California 95814

To join the WebEx meeting, click the following link and enter the meeting number and password provided below:

Topic: 2011 Emerging Technology Demonstration Grant Program (ETDG II) Workshop
Date: Tuesday September 13th, 2011
Time: 1:00 p.m., Pacific Standard Time (GMT -08:00, San Francisco)
Meeting Number: **922 600 087**
Meeting Password: **meeting@1**

COMPUTER LOGON WITH A DIRECT PHONE NUMBER

1. Please go to <https://energy.webex.com> and enter the unique meeting number: **922 600 087**
2. When prompted, enter your information and the following meeting password: **meeting@1**
3. After you login, a prompt will appear on-screen for you to provide your phone number. In the Number box, type your area code and phone number and click OK to receive a call back on your phone for the audio of the meeting.

International callers can use the "Country/Region" button to help make their connection.

COMPUTER LOGON FOR CALLERS WITH AN EXTENSION PHONE NUMBER, ETC.

1. Please go to <https://energy.webex.com> and enter the unique meeting number:
922 600 087
2. When prompted, enter your information and the following meeting password:
meeting@1
3. After you login, a prompt will ask for your phone number. CLICK CANCEL.
4. Instead call **1-866-469-3239** (toll-free in the U.S. and Canada). When prompted, enter the meeting number above and your unique Attendee ID number which is listed in the top left area of your screen after you login. International callers can dial in using the "Show all global call-in numbers" link (also in the top left area).

TELEPHONE ONLY (NO COMPUTER ACCESS)

1. Call **1-866-469-3239** (toll-free in the U.S. and Canada) and when prompted enter the unique meeting number above. International callers can select their number from <https://energy.webex.com/energy/globalcallin.php>

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TECHNICAL SUPPORT

For help with problems or questions trying to join or attend the meeting, please call WebEx Technical Support at 1-866-229-3239.

System Requirements: To see if your computer is compatible, visit <http://support.webex.com/support/system-requirements.html>

Meeting Preparation: The playback of UCF (Universal Communications Format) rich media files requires appropriate players. To view this type of rich media files in the meeting, please check whether you have the players installed on your computer by going to <https://energy.webex.com/energy/systemdiagnosis.php>

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For assistance before the meeting, you may also contact Mylsia Jenkins at:

MJenkins@energy.state.ca.us
1-916-327-1551

15. Abstract Requirements (Stage 1):

Abstracts must meet all requirements of **Attachment G** (Abstract Screening Criteria). ***Failure to meet all requirements of Attachment G WILL result in the proposal not passing the initial screening.***

There are no restrictions on the number of abstracts an Applicant may submit for consideration under any of the four Targeted Technology Areas (**Attachment F**) as long as the abstracts are unique and not variations of the same project.

16. Abstract Submission Instructions:

- A. Limit abstracts to **six (6) pages**. The abstract cover page, site letter of intent, and other letters of support do not count against this limit.
- B. Use one-inch margins.
- C. Use 12 point font.
- D. Submit one (1) original and six (6) copies of the abstract
- E. Submit a CD containing all the documents related to the abstract.

One (1) original and six (6) copies of the abstract **and** a CD containing all the documents related to the abstract **must be received no later than October 6th, 2011 by 4:00 p.m.** Mail abstracts to:

California Energy Commission
Grants and Loans Office
Attn: ETDG II Program
1516 Ninth Street, MS-1
Sacramento, CA 95814

Postmark dates of mailing, electronic mail (E-mail), and facsimile (Fax) transmissions are not acceptable in whole or in part under any circumstances. The Energy Commission will reject all proposals not received by its Grants and Loans Office by the designated deadline.

17. Formal Proposal Requirements and Elements (Stage 2):

Proposals must contain the requirements and elements required by **Attachment H, Section 1** (Formal Proposal Screening Criteria) **and Attachment H, Section 2** (Formal Proposal Scoring Criteria).

- **Failure to include the requirements and elements required by Attachment H, Section 1 WILL result in the rejection of your proposal.**
- **Failure to include the requirements and elements required by Attachment H, Section 2 WILL result in your proposal receiving a lower score and MAY result in your proposal being rejected and ineligible for funding.**

18. Confidential Information:

No confidential information will be accepted during the proposal and selection phase of this solicitation (this includes the abstracts submitted in Stage 1 and final proposals in Stage 2). **If any confidential information is submitted, the entire proposal will be rejected and will not be eligible for funding.** Proposals containing confidential information will be returned to the Applicant.

While discouraged, Applicants may **propose** to deliver confidential products during the course of the project if their grant is awarded. If necessary, approval and instructions for submitting confidential products will be provided by the Energy Commission prior to executing the Grant Agreement.

19. Proposal Submission Instructions:

Proposals must adhere to the following guidelines. ***Failure to adhere to these guidelines MAY result in your proposal being rejected and not eligible for funding.***

- A. Limit proposals to a maximum length of 45 pages total (including the cover page, executive summary, project narrative, scope of work, budget forms, schedule, resumes, and letters of commitment).
- B. Use a standard 12-point Times New Roman font.
- C. Use 1-inch or larger page margins (except when templates use different formatting).
- D. Number the pages in the body of the proposal.
- E. Provide hard copies of one (1) original and six (6) copies of the proposal **and** a CD containing all the documents related to the proposal (Word, Excel, pdf format). (Note: Excel must be used for the budget and schedule templates and will not be used for any other documents.) The original must be signed by an authorized representative of the Applicant's organization. The original should be bound only with a binder clip; the other six (6) copies should be bound only with a staple in the upper left corner. **No covers or other types of bindings are allowed.**

One (1) original and six (6) copies of the grant application **and** a CD containing all the documents related to the proposal **must be received no later than December 22nd, 2011 by 4:00 p.m.** Mail completed grant applications to:

California Energy Commission
Grants and Loans Office
Attn: ETDG II Program
1516 Ninth Street, MS-1
Sacramento, CA 95814

Postmark dates of mailing, electronic mail (E-mail), and facsimile (Fax) transmissions are not acceptable in whole or in part under any circumstances. The Energy Commission will reject all proposals not received by its Grants and Loans Office by the designated deadline.

Applications that do not include at least one (1) signed original and six (6) copies or have not been received by the Energy Commission by the specified due date and time will not be considered for funding.

20. Grounds for Rejection:

Abstracts and/or proposals **WILL** be rejected and not considered for funding if:

- A. The abstract does not include all elements required in **Attachment G**.
- B. No abstract was submitted, or the abstract did not pass the Stage 1 screening phase.
- C. The abstract does not include one or more letters of intent from a California demonstration site.
- D. The proposal does not include all elements required in **Attachment H, Section 1**.
- E. The proposal does not include one or more letters of commitment from a California demonstration site(s).
- F. The abstract/proposal is not received by the Energy Commission's Grants and Loans Office by the stated due date and time (see item 13).
- G. The abstract/proposal contains confidential information.
- H. The Applicant proposes a technology that has been demonstrated at an industrial scale or is commercially available.
- I. The proposed research has no clear market connection to California industry.
- J. The abstract/proposal does not include letters of support from industrial /utility partners.
- K. The proposed research does not have near term (within 5 years) benefits to Californians and/or the calculations of benefits and assumptions are not reasonable.

- L. The proposed research does not address an issue or problem relevant in California.
- M. An Applicant submits more than one proposal for the same project or for minor variations of the same project.

Abstracts and/or proposals **MAY** be rejected and not considered for funding if:

- A. The proposal does not satisfactorily address each element listed in **Attachment H, Section 2**.
- B. The abstract/proposal contains false or misleading information.

21. Cancellation or Amendment of this Solicitation:

The Energy Commission reserves the right to amend or cancel this solicitation. It is the policy of the Energy Commission not to solicit proposals unless there is a bona fide intention to award an Agreement. The Energy Commission reserves the right to do any of the following:

- Cancel this solicitation.
- Revise the amount of funds available under this solicitation.
- Amend or revise this solicitation as needed.
- Reject any or all proposals received in response to this solicitation.

22. Whom Do I Contact for More Information and Questions:

Questions regarding this solicitation and the ETDG Program should be sent via email or letter to:

Crystal Presley-Willis
California Energy Commission
PIER Program
1516 Ninth Street MS-1
Sacramento, CA 95814
Cpresley@energy.state.ca.us

Questions submitted to the Energy Commission by the specified deadline will be answered and posted on the Energy Commission website at www.energy.ca.gov/contracts as part of this solicitation package. The person and organization submitting a question will not be identified.

23. Attachments:

- A. Abstract and Proposal Cover Page Template and Instructions
- B. Scope of Work Template
- C. Scope of Work Template Instructions
- D. Budget Template and instructions
- E. Schedule of Products and Due Dates Template and Instructions

- F. Targeted Technology Areas
- G. Stage 1: Abstract Screening Criteria
- H. Stage 2: Formal Proposal Screening and Scoring Criteria
- I. Preference Points for California-Based Entities (CBE)
- J. CBE Preference Points Form (If Applicable)
- K. Prevailing Wage Special Condition Template
- L. Prevailing Wage Compliance Certificate
- M. Prevailing Wage Compliance Qs & As
- N. PIER Grant Terms and Conditions
- O. Recent Demonstration Projects Funded by the IAW Program

ATTACHMENT A

ABSTRACT AND PROPOSAL COVER PAGE TEMPLATE AND INSTRUCTIONS

[The proposal cover page template for this solicitation is a separate Microsoft Word document. The template can be accessed at www.energy.ca.gov/contracts as part of this solicitation package.]

ATTACHMENT B
SCOPE OF WORK TEMPLATE

[The Scope of Work template for this solicitation is a separate Microsoft Word document. The template can be accessed at www.energy.ca.gov/contracts as part of this solicitation package.]

ATTACHMENT C

SCOPE OF WORK TEMPLATE INSTRUCTIONS

The Scope of Work Template contains the framework to use to complete the Scope of Work. The template has instructions in blue type within < > that are to be deleted as it is filled out. The following are additional instructions for the items in the Scope of Work. At the end of these instructions, there are examples of Technical Tasks to provide guidance in drafting your own.

I. Technical Task List

Insert the Task numbers and Task names for the project. Put an "X" in the CPR column next to the Tasks that contain a Critical Project Review. Add additional rows as necessary.

Two tasks are required to be performed by the Applicant at the initiation of the project:

- 1) Verifying that the proposed demonstration site can still host the project, or else obtaining a new demonstration site.
- 2) Confirming the third-party Measurement & Verification vendor for the project, or else obtaining a new vendor.

Applicants should use Tasks 2.1 and 2.2 in **Attachment B** to reflect their plans to fulfill these two required activities.

II. Key Name List

List key parties within the agreement as described below. See Terms and Conditions for more information regarding key parties within the agreement.

Key Personnel are employees or consultants who are critical to the outcome of the project and are being paid with PIER funds. Key Personnel have expertise in the project field or experience that is not available from another source. Replacing these individuals may be difficult due to their expertise and may affect the outcome of the project. Since key personnel can come from various organizations working on the agreement, they should be written as follows to avoid confusion: "John Smith – Acme Company"

Key Subcontractors are contractors, subcontractors, or vendors who are critical to the outcome of the project and are being paid with PIER funds. Key Subcontractors have expertise in the project field or experience that is not available from another source. Replacing these individuals may be difficult due to their expertise and may affect the outcome of the project.

Key Partners are participants in the Project who are not receiving PIER funds and are not providing Match Funds but are integral to the outcome of the Project. Key Partners may be providing space, testing facilities, demonstration sites or may be a manufacturer or other implementer of the Project results. Individual key

employees from the Key Partner organizations are listed under “Key Personnel.” “Key Partners” are company names.

III. Glossary

Spell out each acronym used in the Scope of Work. Also include definitions of odd or unusual terms. Think about the document from the perspective of someone who does not work in the particular industry or discipline.

IV. Problem Statement

Describe the problem that this research will address in three to four paragraphs maximum.

A. Current state of technology: Describe the scientific and technological baseline, that is, the current state-of-the-art or the developmental status of the subject technology to be advanced. Include links to current and past efforts.

B. Past research efforts: Identify entities engaged in development of the subject technology. Discuss how your project enhances these efforts and is not duplicative or overlaps with other ongoing RD&D. Emphasize past advances that you have made in areas relevant to the proposed work.

Describe the deficiencies that exist for the subject technology. The deficiencies should illuminate the question of *why* the proposed project should be done.

C. Barriers: Identify and discuss the principal barriers, key unresolved issues, and knowledge gaps that hinder the development and widespread use of the resource or the products of the proposed research in California. Barriers may be grouped under the following categories, or additional categories that the Applicant deems appropriate:

- Scientific and technological – such as insufficient scientific understanding of relevant phenomena and processes, inadequate data acquisition technologies, low reliability, low power density, low energy density, lack of detailed engineering designs and design trade-off analyses, inadequate component development, high cost of fabrication techniques, insufficient field testing, or insufficient field demonstrations. Identify trade associations and others who are working with you to overcome this barrier.
- Market – such as inadequate consumer knowledge or limited system supply and maintenance infrastructure. Identify marketing partners and others who will work with you to overcome this barrier.
- Institutional – such as regulatory hurdles (e.g., atmospheric emission limitations) or lack of adopted standards. Identify regulatory agencies and others who will work with you to overcome this barrier.

- Environmental – such as H₂S emissions, excessive noise, or groundwater contamination. Identify regulatory agencies and others who will work with you to overcome this barrier.

Explain why these barriers have not been addressed by the marketplace or by other institutions.

Explain why the barriers should be addressed at this time and why your project will succeed in overcoming these barriers. For example, place the proposed work into the context of the spectrum of barriers to widespread deployment and adoption.

V. Goals of the Agreement

At the beginning of this section, complete the following sentence. Please be succinct.

The goal of this project is to ... *<Complete the sentence with a brief description of the goal(s) and how the goal(s) will be met. Goals can be technical, economic or social. Please be brief, two to three sentences maximum.>*

VI. Objectives of the Agreement

The objectives of this project are to ... *<Complete this sentence with the objectives, which are things that will be measurable or knowable at the end of this project.>*

If the improvements that your project will make are not amenable to measurement, surrogate performance metrics that can be measured must be given. Describe the methodology or procedure that will be used at the completion of the project to determine if the performance metrics have been achieved.

List and describe technical or economic objectives, or desired conditions outside the project itself that will result from the success of the project.

VII. Task 1.0 Administration

A. The administrative tasks must be included in every agreement and, except for Tasks 1.8 and 1.9, the language does not change. Do NOT write anything in these tasks except for Task 1.8 and 1.9.

B. Final Report Requirement: In addition to the requirements found in the Scope of Work Template (**Attachment B**) referring to the Final Report, certain additional content is required to appear in Final Reports. The information in the paragraph below applies to Applicants who will have successfully earned grant awards and gone on to perform demonstration projects:

Final Reports must describe how the use of PIER funds and working with the California Energy Commission has impacted the technology commercialization efforts. For example: how the completion of this government-sponsored effort will allow the company to pursue additional government and federal funding opportunities, how working with the government and completing a demonstration project may help with the

commercial acceptance of the product, how having an impartial third party evaluate the company's product(s) may help in future commercial growth, how managing government contracts demonstrates company accounting and accountability capabilities, etc.

C. Tasks 2.1 and 2.2 Project Initiation: As mentioned above, two tasks are required to be performed by Applicants at the start of projects and the verification is due at the Kickoff Meeting:

- 1) Verifying that the proposed demonstration site can still host the project, or else obtaining a new demonstration site.
- 2) Confirming the third-party Measurement & Verification vendor for the project, or else obtaining a new vendor.

Applicants should use Tasks 2.1 and 2.2 in **Attachment B** to reflect their plans to fulfill these two required activities. Failure to verify that the proposed demonstration site can host the project and that the third-party Measurement & Verification vendor can provide the required services can result in cancellation of the grant award.

VIII. Technical Tasks (Tasks 3 through n)

This is the area in the Scope of Work where the technical work to be performed under this Agreement is set forth. The work effort should be divided into a series of logical, discrete and sequential tasks. Each task has the following components:

- Task Name
- The goal of this task is to ...
- The Recipient shall:
- Products

A. The Goal

The goal of this task is to ... *<Complete the sentence with a brief description of the goal(s). Please be brief, two to three sentences maximum.>*

B. The Recipient shall ...

List each individual **activity** with a separate bullet if there are more than two individual activities and begin each bullet with a verb to complete the sentence beginning with "The Recipient shall." Organize activities in the order in which they will occur. Use this section to describe the essential elements of the process you will use to complete the project. The contents of each product shall also be described in this section.

For Example:**The Recipient shall:**

- Prepare the X Test Plan. This plan shall include, but is not limited to ...
- Submit the X Test Plan to the Commission Project Manager ...
- Conduct research in accordance with the X Test Plan.
- Prepare the X Test Results Report. This report shall include, but is not limited to, the following ...

Please note that if a project is for demonstration, or if a project involves testing, one of the tasks should be Test Plan preparation. The Test Plan should include considerations such as the number of hours of operation, the type of monitoring to be preformed, the manner in which data will be validated, analyzed, and reported.

C. Products:**Product(s):**

- *<Insert 1st product (name only)>*
- *<Insert 2nd product (name only)>*

Only the names of each product shall appear in the “Products” section. Use exactly the same name to identify a product (report, data set, project plan, etc.) in the activity and in the list of products.

Products incorporate the knowledge and understanding gained by performing the activities, and are submitted to the Energy Commission for review, comment and approval. Products include, but are not limited to, written reports that describe methods, test plans, results of testing, analysis of data, conclusions, and recommendations for future study, workshop agendas and summaries, description and photographs of equipment/product developed, summaries of advisory group meetings, computer software with written instructions for data input and use of the software, if intended for public or Energy Commission use, and production prototypes. The summaries of the Products should be sufficiently detailed to be of use to stakeholders and other researchers. The level of detail should be sufficient for an observer to assess whether the project objectives and goals have been successfully met.

E. Task n-1 Technology Transfer Activities

Change the language as appropriate for your project.

F. Task n Production Readiness Plan

Change the language as appropriate for your project.

IX. Examples of Different Types of Technical Products *(These are examples, which you may modify for use in your project. You may create other products as needed, but please adhere to the patterns shown.)*

1. Written Notification

- Provide a Written Notification regarding _____, to the Commission Project Manager. *(Give it a unique name based on the content and the project.)* The letter shall include but is not limited to written documentation that the _____ is ready for *(testing, viewing, submission for certification, etc.)* and the date such *(testing, viewing, submission for certification, etc.)* shall begin, and shall include photographs.

Product: Written Notification regarding _____

2. Test Plans

- Prepare the _____ Test Plan. *(Give it a unique name, such as the Site A Test Plan. Test plans and testing procedures should be described in detail including factors such as instrumentation, data collection, data analysis, statistical analyses, and performance curves. Test results shall include relationships among performance, efficiency, emissions, temperature, pressure and all other parameters that qualify and quantify the subject technology.)* The Test Plan shall include, but is not limited to:
 - a description of the process to be tested;
 - the rationale for why the tests are required;
 - predicted performance based on calculations or other analyses;
 - test objectives and technical approach;
 - a test matrix showing the number of test conditions and replicated runs;
 - a description of the facilities, equipment, instrumentation required to conduct the tests;
 - a description of test procedures, including parameters to be controlled and how they will be controlled; parameters to be measured and instrumentation to measure them; calibration procedures to be used; recommended calibration interval; and maintenance of the test log;
 - a description of the data analysis procedures;
 - a description of quality assurance procedures;

- contingency measures to be considered if the test objectives are not met;
- *<add additional bullets specific to the project as needed>.*

Product(s):

- Draft _____ Test Plan
- Final _____ Test Plan

3. Interim Reports (*This applies to all product reports. Examples include task and subtask reports, test reports, data sets, databases and computer model development or application. Monthly reports and the final report are treated separately as shown in the Scope of Work.*)

- Prepare the _____ Report (*Give it a unique name, such as the ABC Test Report or 123 Database. If an interim report is based on earlier work in this project, then the titles should relate to each other. After the title insert a description of the product.*) This report shall include, but is not limited to, the following: (*List the elements of the report in separate bullets.*)

For example, if the Interim Report is a Test Report, use the following description:

The Test Report shall include, but is not limited to, the following:

- the Test Plan;
- test results;
- analysis;
- conclusions;
- recommendations;
- photographs as appropriate;
- *<add additional bullets specific to the project as needed>.*

For example, if the Interim Report is a Task or Subtask Report, use the following description:

The Task or Subtask Report shall include, but is not limited to, the following:

- the goal of the task or subtask;
- the description of the approach used;
- list of activities performed;
- description of the results and to what degree the goal was achieved;
- significant issues encountered and how they were addressed;

- a discussion of the implications regarding the success or failure of the results, and the effect on the budget and the overall objectives of the project;
- photographs as appropriate;
- *<add additional bullets specific to the project as needed>.*

Product(s):

- Draft _____ Test (Task, Database, etc.) Report
- Final _____ Test (Task, Database, etc.) Report

4. Bills of Materials or Equipment Lists

- **Prepare a Bill of Materials (or Equipment List) for _____.** *(Give it a unique name.).* This document shall include but is not limited to:
 - a description of each item;
 - test protocols and codes applicable to each item;
 - cost estimates or bids for each item.

Product: Bill of Materials (or Equipment List) for _____

5. Site Selection (optionally, this can be incorporated into a Test Plan)

- Determine Site Selection Details for the field test site, including but not limited to the following, and obtain Commission Project Manager approval:
- Type of site, i.e., <Sites for Wind Energy Storage Projects>
 - Residential
 - Specify type of dwelling: single family, multiple family including number of units, apartment, townhouse, etc.
 - Specify age of dwelling: new home construction, model home, existing home (indicate approximate age)
 - Commercial (specify warehouse, retail, office, etc.) <Sites for Wind Energy Storage Projects>
- Number of sites
- Location, i.e., climate zone, area, or city
- Timing of testing (i.e., season or month), length and frequency of testing
- Agreement with site owner, to address issues such as:
 - Details of test, including dates, length of test
 - Site owner input and feedback on test conditions
 - Access to site
 - Insurance and indemnity
 - Contingency if damages are caused by test
 - Equipment installation and removal

Once the site is selected, Recipient shall enter into an agreement with the site owner and make a copy of the agreement available to the Commission Project Manager upon request.

Product: Written Notification of Site Selection

ATTACHMENT D
BUDGET TEMPLATE AND INSTRUCTIONS

[The budget template and instructions for this solicitation is a separate Microsoft Excel document. The template can be accessed at www.energy.ca.gov/contracts as part of this solicitation package.]

ATTACHMENT E

SCHEDULE OF PRODUCTS AND DUE DATES TEMPLATE AND INSTRUCTIONS

[The schedule of products and due dates template and instructions for this solicitation is a separate Microsoft Excel document. The template can be accessed at www.energy.ca.gov/contracts as part of this solicitation package.]

ATTACHMENT F

TARGETED TECHNOLOGY AREAS

The 2011 Emerging Technology Demonstration Grant (ETDG II) will focus on demonstrating energy efficient emerging technologies for the four Targeted Technology Areas listed below, along with areas of interest under each category. The listed project categories and areas of interest are only examples, and the list is **not** an exhaustive enumeration of eligible projects. Technologies to be demonstrated **must be beyond the “proof-of-concept” stage** with a convincing proof of performance at a laboratory scale or pilot scale. Applicants **MUST** certify that their proposed project is not duplicative of past projects funded by the PIER IAW program, utilities, or any other entities (see **Attachment G, Section 2.e**). A list of current PIER IAW demonstration projects is provided in **Attachment O** to aid in the identification of **some** recent technology research projects.

I. Water and Wastewater Projects:

- Energy and water use optimization of process water, wastewater and potable water treatment, industrial systems (e.g., membrane technology, desalination, demineralization, zero liquid discharge)
- Reduction in industrial waste water that saves energy on site
- New technologies that integrate renewable resources (biomass, solar, etc.) into infrastructure and operation of water and wastewater treatment plant systems
- Development and utilization of lower energy intensity water sources (e.g., water recycling, storm water)
- Energy and water use optimization, recycling or recovery of process water or wastewater, potable water treatment, and industrial water systems (e.g., membrane filtration technology, desalination, demineralization, zero liquid discharge)
- Reduction in industrial wastewater discharge to save energy on site or reduce volume or treatment energy requirements for wastewater discharged to off-site treatment facilities
- Agricultural or landscape irrigation system energy efficiency
- Demand Response

II. Data Center Projects:

- Data center efficiency (cooling or electrical use)
- Outside air cooling
- Innovative server designs (DC, liquid cooling, etc.)
- Power management
- Cooling technologies
- Innovative server designs
- Equipment and network improvements

- Demand response

III. Customer-Side Electricity Storage Projects:

- Energy storage for peak load reduction
- Energy storage for load management or demand response
- Energy storage for integration of renewable generation
- Energy storage to support utility ancillary services

Note: An electricity storage project that solely delivers power quality or Uninterruptable Power Supply (UPS) benefits is not eligible unless it also provides reduction in electrical energy or demand.

IV. Industrial Energy Efficiency Projects:

General Industrial Energy Efficiency Demonstration Projects:

- Industrial process heating or cooling from renewable resources
- Waste heat recovery
- Energy efficient industrial heating, cooling or refrigeration
- Advanced sensors and controls systems
- Advanced burners
- Innovative combined heat and power (CHP) technologies
- Biomass utilization to reduce demand for electricity and/or natural gas
- Demand Response
- Industrial scale integrated renewable, energy storage and demand response system designed for industrial end-users

Food Processing Industry:

- Blanching
- Drying and dehydrating
- Evaporation
- Frying
- Pasteurization and Sterilization
- Peeling
- Innovative CHP technologies
- Refrigeration
- Demand response

Cement Industry:

- Improvements to raw materials preparation (leading to energy consumption reduction)
- Clinker process improvement for energy efficiency
- Waste heat recovery
- Advanced heat transfer technologies

- Carbon Capture Technology Improvements in the Cement Industry: Low drag coatings for pipelines, improvements to compressor technology, optimization software with real time pipeline monitoring sensors
- Advanced Additives for the Cement Industry that reduce energy consumption and GHG emissions
- Innovative CHP technologies
- Demand response

Chemical Manufacturing Industry:

- Energy Management Programs and Control Systems
- Distillation Process (Vacuum and atmospheric)
- Heating, Cooling and Process Integration
- Demand response

Glass Industry:

- Energy efficient batch preparation equipment
- Glass melting, refining and conditioning
- Oxy-fuel furnaces
- Forehearth and forming
- Annealing and finishing
- Submerged combustion melting
- Oscillating combustion
- Segmented melters
- Waste heat recovery (Oxy-fuel, regenerative and recuperative furnaces)
- Innovative CHP technologies
- Advanced heat transfer technologies
- Demand response

Pharmaceutical Industry:

- Energy Management Systems
- Fume Hoods
- Cleanrooms
- Energy efficient heat and steam generation and distribution
- Advanced refrigeration (new fluids, cycles, etc.)
- Waste heat recovery
- Demand response

NOTE: Above are some of the industrial sectors and areas of interest to the IAW group. The above list is by no means an exhaustive list for industrial sectors or eligible projects. Demonstration projects that are applicable to other industrial sectors in California or are not listed above are still eligible to apply.

ATTACHMENT G

STAGE 1: ABSTRACT SREENING CRITERIA

Abstract Screening Criteria – Pass/Fail

The abstract must pass ALL criteria to be eligible for submission of a complete proposal for the scoring, ranking, award, and funding stages.

Stage 1 submission is limited to six (6) pages using one inch margins and 12 point font. The abstract cover page, site letter of intent, and other letters of support do not count against this limit.

- Applicants must use **one-inch margins** and **12-point font**, and must submit **one (1) original** and **six (6) copies** of the abstract. Applicants must also submit **one CD** containing all documents related to the abstract. See item 16 (Abstract Submission Instructions) for details.
- It is acceptable for Applicants to repeat information in different sections, but they must provide the required information in the corresponding sections and must order the sections as described below.
- Applicants **MUST organize the sections of their project abstracts following the instructions below**. These instructions are provided to make abstracts more uniform and to accelerate the scoring process.

The following are the titles and the order of the subsections to be contained in the abstracts. The list of criteria referenced is contained in the next pages:

1. **Abstract Cover Page** (*does not count against page limit*)
(Addresses **criterion 1**)
2. **Project Summary**
(Addresses **criteria 2, 3, 4, 7, and 8**)
3. **Background on Proposed Technology**
(Addresses **criterion 6**)
4. **Proposed Demonstration Site**
(Addresses **criteria 2, 7.b, and 7.c**. In this section, applicants are encouraged to describe their plans to acquire a backup demonstration site in case the proposed site becomes unavailable.)
5. **Match Funding Description**
(Addresses **criterion 5**)
6. **Letter of Intent** (*does not count against page limit*)
(Addresses **criterion 7.a**)
7. **Letter(s) of Support from Partners** (*does not count against page limit*)
(Addresses **criterion 10**)

1. Abstract Cover Page (Attachment A) Includes an Abstract Cover Page that includes all of the information required by Attachment A and signed by an Authorized Representative.	<input type="checkbox"/> Pass <input type="checkbox"/> Fail
2. Project Summary a. Clearly describes the proposed emerging technology and its current stage of development. b. Clearly states the purpose and scope of the proposed emerging technology demonstration, and outlines the issues the demonstration will address. c. Summarizes the technical approach and principal tasks required to accomplish the technology demonstration. d. Describes the relevant technical, siting, and implementation issues or barriers that must be addressed to accomplish demonstration project's objectives and ensure timely installation. e. Explains why the demonstration is: unique; not duplicative of past projects funded by the PIER IAW program, utilities, or any other entities; and needed or necessary to promote adoption by the market. f. Describes the duration of the project and estimated time before full commercialization (5 years or less) if the demonstration is successful. g. Includes the grant amount requested and how much match funding will be provided. h. Clearly lists research product(s)/result(s) and benefits to Californians. i. Describes industry, utility and other market support/need for the technology.	<input type="checkbox"/> Pass <input type="checkbox"/> Fail
3. Addresses Emerging Targeted Technology Areas Unequivocally belongs to at least one of the technology demonstration categories identified in the Targeted Technology Areas (see Attachment F).	<input type="checkbox"/> Pass <input type="checkbox"/> Fail
4. Time Frame - Completed within three (3) years of award The proposed project is able to be completed within 36 months from the project start date.	<input type="checkbox"/> Pass <input type="checkbox"/> Fail
5. Match Funding At least twenty-five percent (25%) of requested PIER funding is provided as match in form of cash, which is defined as equipment, materials, travel, information technology (IT) services, and subcontractor costs. Please note that "cash" does not include in-kind prime contractor labor, which is allowable but not incentivized.	<input type="checkbox"/> Pass <input type="checkbox"/> Fail

6. Proof of Lab/Bench-Scale, Technical Feasibility, Reliability and Safety a. The abstract is expected to provide proof of lab/bench-scale of the technology; the abstract must provide quantitative data on performance of the lab/bench-scale technology. b. The performance data discussed in the abstract should be from a prototype or a pilot-scale unit that has enough operating hours to demonstrate that the technology can be scaled-up to industrial level, is capable to perform with reliability and safety at an industrial site. c. The abstract is expected to provide sufficient proof that the technology is ready to be scaled-up to an industrial demonstration level.	<input type="checkbox"/> Pass <input type="checkbox"/> Fail
7. Demonstration Site Appropriate for Emerging Technology and Applicable Emerging Technology Market a. The project has a letter of intent from an industrial demonstration site in California and provides a name and contact information to verify the availability of the industrial site for the duration of the technology demonstration. <i>(It is recommended that the abstract also identify additional potential industrial demonstration sites in California.)</i> b. The abstract must discuss why the industrial site where the technology is to be demonstrated is appropriate and how the demonstration will be consistent with the potential/intended market(s) or application for the proposed technology. c. The industrial demonstration project is of sufficient scale to provide meaningful data to facilitate commercialization of the technology in its intended market.	<input type="checkbox"/> Pass <input type="checkbox"/> Fail
8. Project Measurement and Verification Plan The abstract describes the technical approach, and identifies an independent third party to conduct the required measurement and verification evaluation equivalent to California energy utility standards for the proposed project.	<input type="checkbox"/> Pass <input type="checkbox"/> Fail
9. Acceptance of Terms and Conditions On the Grant Proposal Cover Page (Attachment A), in item 4, the Applicant has placed a check by and therefore affirms the statement that it will abide by the PIER Grant Terms and Conditions.	<input type="checkbox"/> Pass <input type="checkbox"/> Fail
10. Letter(s) of support from partners The abstract includes at least one letter of support for the project from industry, market, regulator, or other partners.	<input type="checkbox"/> Pass <input type="checkbox"/> Fail
11. Abstract Organization The abstract is submitted and organized in accordance with the instructions at the top of this table and includes the required seven sections: (1) Cover Letter; (2) Project Summary, (3) Background on Proposed Technology, (4) Proposed Demonstration Site, (5) Match Funding Description; (6) Letter of Intent; and (7) Letter(s) of Support from Partners.	<input type="checkbox"/> Pass <input type="checkbox"/> Fail

ATTACHMENT H**STAGE 2: FORMAL PROPOSAL SCREENING AND SCORING CRITERIA****Section 1: Proposal Screening Criteria**

Project Screening Criteria – Pass/Fail The Proposal must pass ALL criteria to progress the scoring, ranking, award, and funding stages.	Pass/Fail
1. Proposal Cover Page (Attachment A) Include a Proposal Cover Page that includes all of the information required by Attachment A .	<input type="checkbox"/> Pass <input type="checkbox"/> Fail
2. Executive Summary a. The maximum length of the Executive Summary is four (4) pages. b. The Executive Summary includes the following at a minimum: (1) project description; (2) project objectives; and (3) quantitative and measurable goals to be achieved.	<input type="checkbox"/> Pass <input type="checkbox"/> Fail
3. Project Narrative <i>(It is recommended that the project narrative be between 10 and 25 pages in length. Please see item 9 below for proposal length requirements)</i> a. The project narrative clearly states which targeted technology area, as defined in Attachment F , is addressed by the proposal. b. The project narrative addresses in detail each of the scoring criteria described in Section 2 of Attachment H . The project narrative provides sufficient detail for reviewers to evaluate the proposal against each of the criteria.	<input type="checkbox"/> Pass <input type="checkbox"/> Fail
4. Scope of Work and Project Plan a. The Scope of Work follows the template contained in Attachment B . Instructions for completing the Scope of Work template are included in Attachment C . b. Provide a description of quantified targets, goals, and market application. c. Explain the target market and the size of the market where the technology can be applied. d. Provide the estimated energy savings or demand reduction at the demonstration site. e. Include one or more tasks for a detailed Technology Transfer Plan that, in addition to other requirements found in Attachment C , includes a plan to communicate to the Energy Commission annually on the status of the technology for a period of 3 years after the grant award period ends. (Consequently, the reporting / information collection portion of the Technology Transfer task shall have an end date that extends beyond the 3-year reporting and collection period. Examples of information to be collected annually include venture or other capital received, units sold and quantity of energy and/or water saved, jobs created in California, and other benefits to California.) f. Tasks 2.1 and 2.2 in Attachment B must reflect the applicant's plans to fulfill two required activities: (1) verify that the proposed demonstration site can still host the project, or else obtain a new demonstration site; and (2) confirm the third-party Measurement & Verification vendor for the project, or else obtain a new vendor. Please see Parts I and VII.C of Attachment C , which address Tasks 2.1 and 2.2.	<input type="checkbox"/> Pass <input type="checkbox"/> Fail

5. Letter of Commitment from Demonstration Site The proposal includes a letter of commitment from a California demonstration site that confirms that the site is committed to hosting the project.	<input type="checkbox"/> Pass <input type="checkbox"/> Fail
6. Resumes a. The proposal includes short resumes (maximum of two (2) pages each) of the principal investigator and key research partners (including individuals in the Applicant's organization or subcontractors). b. The resumes emphasize experience related to the activities to be performed in the project.	<input type="checkbox"/> Pass <input type="checkbox"/> Fail
7. Budget a. The proposal includes completed budget forms contained in Attachment D . b. The budget allows for the expenses of a Kick-off Meeting, at least two Critical Project Review meetings, and a Final Meeting. It is anticipated that meetings will be conducted at the Energy Commission located in Sacramento, CA. c. The budget allows for permits, insurance, etc., and limits the funding source for these items to match funds. d. The budget allows for the preparation and submission of monthly progress reports (2-4 pages each) during the approved term of the agreement, and a final report that follows Energy Commission guidelines that can be found at: http://www.energy.ca.gov/contracts/pier/contractors/index.html . e. The budget reflects estimates for actual costs to be incurred during the approved term of the project. <i>(The Energy Commission can only approve and reimburse expenditures for actual costs that are properly documented in accordance with the PIER Grant Terms and Conditions.)</i> f. The budget does not include any profit from the proposed project, either as a reimbursed item or as match share. <i>(In accordance with the PIER Grant Terms and Conditions, NO PROFIT IS ALLOWED UNDER GRANT AGREEMENTS. Please review the PIER Grant Terms and Conditions for additional restrictions and requirements.)</i>	<input type="checkbox"/> Pass <input type="checkbox"/> Fail
8. Schedule of Products and Due Dates a. The Schedule follows the template specified in Attachment E . b. The Schedule is consistent with the information provided in the submitted Scope of Work.	<input type="checkbox"/> Pass <input type="checkbox"/> Fail
9. Page Length The Proposal is limited to a maximum length of 45 pages total including cover page, executive summary, project narrative, scope of work, budget forms, schedule, resumes, and letters of commitment.	<input type="checkbox"/> Pass <input type="checkbox"/> Fail
10. Font, Margins, and Page Numbering a. The proposal uses standard 12-point Times New Roman font. b. Page margins are 1-inch or larger page margins (except when templates use different formatting). c. The pages in the body of the proposal are numbered.	<input type="checkbox"/> Pass <input type="checkbox"/> Fail
11. Duration of Proposed Project The project duration is no longer than three (3) years, assuming a grant agreement start date of no earlier than November 1, 2012.	<input type="checkbox"/> Pass <input type="checkbox"/> Fail

12. Funding Requested The PIER funding requested is not less than \$750,000 and does not exceed \$2,000,000.	<input type="checkbox"/> Pass <input type="checkbox"/> Fail
13. Match Funding The match funding as defined in item 9 (Match Funding Requirements) in the solicitation manual is equivalent to at least 25% of the requested PIER funding.	<input type="checkbox"/> Pass <input type="checkbox"/> Fail
14. Copies of Proposal <ol style="list-style-type: none"> The pages in the body of the proposal are numbered. The applicant has provided hard copies of one (1) original and six (6) copies of the proposal The applicant has provided a CD containing all the documents related to the proposal (Word, Excel, pdf format). The original is signed by an authorized representative of the Applicant's organization. The original is bound only with a binder clip. The six (6) copies are bound only with a staple in the upper left corner. No covers or other types of bindings are allowed. 	<input type="checkbox"/> Pass <input type="checkbox"/> Fail

Section 2: Project Scoring Criteria

Scoring Scale

All Applicants whose abstracts pass Stage 1 screening will be invited to submit full proposals to Stage 2. All proposals submitted to Stage 2 will be evaluated for merit based on the following technical and policy evaluation criteria, using the scale shown in the table below.

0	Not responsive to the criterion
1-2	Response is minimal
3-4	Responds only marginally to relevant considerations under the criterion
5-6	Responds satisfactorily to most relevant considerations under the criterion
7-8	Responds satisfactorily to all relevant considerations under the criterion
9	Responds completely, accurately, and convincingly to all relevant considerations under the criterion
10	Response is complete, specific, and superior, both quantitatively and qualitatively

Each criterion is rated on scale of 0 to 10, with zero (0) being the lowest and ten (10) being the highest possible point for that criterion. Each criterion has an assigned weight factor and the final score for each criterion is a composite of how the proposal is rated on the criterion and its weight. **The minimum passing score is 700 out of a possible 1000 points.** Proposals that are submitted by California-based entities and that receive the minimum score of 700 will have preference points added to their scores as outlined in **Attachment I**.

1. Project Proposal – Demonstration Project Goals, Objectives

Possible Points: 0-10

Weighting Factor: 6

Maximum Score Possible: 60

The extent to which:

- a. The demonstration project goals and objectives are clearly stated and are responsive to the Targeted Technology Areas (see **Attachment F**).
- b. The proposal includes and clearly discusses the results from a laboratory-scale, bench-scale or pilot-scale project and clearly addresses the issue of how these results demonstrate the technology's performance, reliability, and safety.
- c. The technology has advanced to a stage where it is ready for an industrial-scale demonstration in the proposed project.

2. Project Connection to the Market and Industry Partners

Possible Points: 0-10

Weighting Factor: 13

Maximum Score Possible: 130

The extent to which:

- a. The technology being demonstrated meets a well defined market need applicable to California industries. The proposal should discuss the intended market, the market size, market needs and barriers and how this technology will address the market as evidenced by specific market research, surveys, and the Applicant's assessment of market drivers.
- b. The project includes appropriate plans to initiate and sustain transfer of the technology results into the marketplace, and has a clear commercialization and market outreach plan within 1-2 years after the project ends.
- c. The project team has the experience, skills, and connections to the marketplace to help ensure market transfer of the technology, product(s), and knowledge that result from the proposed demonstration project.
- d. The proposal provides a letter of commitment from an authorized legal representative of the demonstration site owner clearly identifying the demonstration site as suitable for the technology at an appropriate scale and duration.
- e. The proposal identifies one or more back-up industrial demonstration sites with the above features in case the first proposed demonstration site becomes unable to host the project.
- f. The proposal provides additional letters of support from utilities and industrial partners as appropriate for the proposed project.
- g. The Project Narrative addresses the information asked for in section IV: Problem Statement contained in **Attachment C** in further detail if necessary. Please see item b in criterion 3: Project Scope of Work.

3. Project Scope of Work

Possible Points: 0-10

Weighting Factor: 17

Maximum Score Possible: 170

The extent to which:

- a. The work scope includes an overall project goal that addresses the key market issues and responds to the market needs and the Targeted Technology Areas identified in **Attachment F**.
- b. The work scope follows the instructions provided in **Attachment C**. The instructions in section IV: Problem Statement contained in **Attachment C** are especially important. The Problem Statement in the Scope of Work must be relatively short (three to four paragraphs) and contain a large amount of information. So in addition, Applicants are encouraged to provide more details in response to those Problem Statement instructions in the proposal's Project Narrative, if appropriate. This suggestion corresponds to item g in criterion 2: Project Connection to Market and Industry Partners.
- c. The work schedule is logical, reasonably sequences tasks, and appropriately allocates time, labor, equipment, and facilities per task.
- d. The proposal explicitly describes requirements associated with the proposed project (such as insurance, permitting requirements) and describes proposed mitigation strategies.
- e. The work scope clearly identifies responsible parties to perform each task and explicitly details project management activities.
- f. The proposal contains a logical and well-defined set of intermediate products and final products.
- g. The proposal includes a clear and methodical plan by which the Applicant's Project Manager will provide regular monthly progress reports to the Commission Project Manager and coordinate the reporting of information to all project team members.
- h. The proposal systematically identifies and assesses project risks (such as plans for completing the project successfully if proposed match funds are significantly reduced or lost, loss of demonstration site(s), etc.) and includes plans for mitigating these risks. The proposal describes clear and complete contingency plans that are appropriate for the risks identified.

4. Project Need – Advances Science or Technology Not Adequately Addressed by Competitive or Regulated Markets

Possible Points: 0-10
Weighting Factor: 7
Maximum Score Possible: 70

The extent to which:

- a. The proposal identifies the current status of the proposed technology and the reason(s) why the technology is important to the industry and why there is a need for a demonstration of the technology/product(s). To the extent possible, the proposal provides **quantitative information** to support these arguments. The proposal must state the assumptions behind its quantitative information and justify the reasonableness of its assumptions.
- b. The proposal identifies and discusses related and available current technologies, why the proposed technology is different and how this demonstration will improve, supplement, and/or replace currently available technology.
- c. The proposal responds to why the proposed project objective(s) is / are not adequately addressed by the competitive or regulated markets and establishes the need for demonstration of the technology by the PIER program.
- d. The proposal discusses existing and planned funding and support by utilities, industry participants and others, and the extent to which existing and planned funding reasonably maintains technological advancement.
- e. The proposal discusses why PIER funding is necessary to advance the proposed science and/or technology and the consequences if funding is not provided.

5. Impact and Benefits for California

Possible Points: 0-10
Weighting Factor: 8
Maximum Score Possible: 80

The extent to which:

- a. The proposed project will provide tangible benefits to California's electricity and/or natural gas ratepayers and industrial customers. The proposal provides explanations of how the project will impact specific industrial market segments in California and how industrial processes used in California will benefit from the proposed technology demonstration.
- b. The proposal describes a technology demonstration that provides energy efficiency advantages compared with existing commercially available technologies and discusses environmental impacts and benefits, if any.

- c. The proposal describes and estimates the baseline energy and/or water use and economics of the current (or standard) technology, and the energy (and possibly water) use of the applicable industrial sector in California. The proposal describes and estimates the corresponding energy use, energy costs and economics of the new technology being demonstrated, and the proposal extrapolates the potential savings to the applicable industrial sector in California. The proposal provides **quantitative information**, states the assumptions behind this information, and justifies the reasonableness of the assumptions. Baseline energy use and economics will be used in measuring potential success of the demonstration in achieving its technical and economic goals, and the extrapolation of savings to the applicable California industrial sector(s) will be used to estimate the potential impact of the technology in the proposed project.
- d. The proposal identifies the market for the technology being demonstrated and quantifies the size of this market in terms of electricity, natural gas, and/or water consumption. The proposal quantifies the expected impact on this market if the technology demonstration is successful – in terms of electricity, natural gas, or water savings; decreased wastewater discharges; other environmental benefits; or increases in productivity. (Productivity may be defined as positive influences on operator behavior, increased ease of operation of equipment, etc.) The proposal quantifies the anticipated percentage of penetration into the marketplace within 2 to 5 years. The proposal **justifies** the reasonableness of the assumptions used to determine these impacts.
- e. The proposal describes the estimated economics of the technology if successful and calculates the projected life cycle cost and savings, including all assumptions on equipment life, operation and maintenance and other costs, and annual energy cost savings and other benefits. The proposal provides an estimate of these costs and benefits versus the standard technology and provides **justification for all assumptions** used to determine the estimated economics.

6. Project Manager and Project Team

Possible Points: 0-10

Weighting Factor: 7

Maximum Score Possible: 70

The extent to which:

- a. The Project Manager has specific organizational, administrative, and team lead skills and a proven track record for managing technology demonstration projects successfully, including the capability of administering the agreement to control costs, maintaining the project

schedule and budget, providing quality control of the products produced by the team, and effectively communicating project results.

- b. The team structure provides clear roles and responsibilities among the team members, and establishes clear lines of communication to ensure that team members share information and meet their individual responsibilities.
- c. The team has the technical experience and proven skills appropriate for the proposed technology demonstration, especially as it applies to industrial sites.
- d. The project team has past success in taking research, development, and technology demonstration products to market and the experience, skills, and market connections to help ensure market transfer of the products and knowledge that result from the project.
- e. The applicant has extensive experience in installing and managing industrial scale equipment at industrial sites comparable to the proposed demonstration site.
- f. The project team demonstrates they have the financial capability to carry out the project, such as the strength of the Company in terms of net worth and assets compared to previous years, the ratio of assets to liabilities, the number of years in business, number of employees, relationships with industrial partner(s) and/or success with past demonstration projects.
- g. The project team includes California-based companies and employees.
- h. The industrial partner/demonstration site is actively and materially involved with the project.
- i. The project team includes involvement by various stakeholders who can help overcome barriers to market acceptance of the technology.

7. Project Cost-Effectiveness (Cost)

Possible Points: 0-10
Weighting Factor: 8
Maximum Score Possible: 80

The proposed project's cost-effectiveness will be evaluated relative to the overall public benefits being provided by the project. This criterion will consider the total cost of the project, the amount of PIER funds being requested, the amount and type of match funds contributed, the likelihood that the project will provide significant near-term science or technology benefits within 2 to 5 years, the

estimated value of the public benefits to be provided by the project, and the timeframe in which those benefits will occur.

The extent to which:

The PIER funds requested are reasonable relative to the goals and objectives of the project.

8. Match Funding (Cost)

Possible Points: 0-10

Weighting Factor: 12

Maximum Score Possible: 120

The extent to which:

- a. The match share provided for the proposed project exceeds the minimum 25% of requested PIER funding in the form of cash (see item 9 "Match Funding Requirements" in the application manual).
- b. The proposed match funds are secure based on the Applicant's company history and/or letter(s) of commitment by other contributing entities.
- c. The proposal describes a strategy for replacing match funding if the proposed match funds are significantly reduced or lost.

9. Project Budget (Cost)

Possible Points: 0-10

Weighting Factor: 22

Maximum Score Possible: 220

The extent to which:

- a. The project budget information provided is consistent with the scope of work. The project budget itemizes reasonable costs for personnel, subcontractors, equipment, operating expenses, operation and maintenance costs for the technology at the demonstration site, insurance, supplies, permits, fees, etc. for each task.
- b. The proposal shows the total budget, the PIER reimbursable budget, and the match funds budget, indicating all funding sources, for each task described in the scope of work.
- c. The proposal itemizes the budget in sufficient detail to justify the expenditures by task. The budget includes the required information for

personnel services, subcontractors, operating expenses, overhead(s), and total expenditures.

- d. The portions of the budget dedicated to demonstration and technology transfer actions are significantly greater than the costs for overhead, including general & administrative.
- e. The budget shows that key personnel and subcontractors will be committed to the project for the appropriate number of hours and functions to accomplish the activities described in the Scope of Work.

ATTACHMENT I

PREFERENCE POINTS FOR CALIFORNIA-BASED ENTITIES

Pursuant to AB 2267 (Fuentes, 2008), the California Energy Commission's Public Interest Energy Research (PIER) Program must give a priority to "California-based entities" (CBEs) when making awards. To implement this law, the Energy Commission will award preference points if the proposal meets the criteria for a CBE as described below.

An Applicant must meet all of the following to receive CBE preference points:

1. The proposal must include a CBE as either the prime contractor/recipient or a subcontractor. A CBE is a corporation or other business form organized for the transaction of business that:
 - Either has its headquarters or an office in California AND
 - Substantially manufactures the product or substantially performs the research within California that is the subject of the award.
2. The budget must show that the CBE(s) will receive 50% or more of the PIER funds awarded.
 - If the CBE is the prime contractor/recipient, no more than 50% of the awarded PIER funds can be subcontracted to non-CBEs.
 - The 50% applies to the PIER funds and does not include the match funding. For example, if a proposal has a PIER budget of \$100,000, then regardless of how much match funding is pledged, the budget must show \$50,000 or more in PIER funds going to CBEs.
 - The 50% requirement can be made up of multiple CBEs. For example, a proposal in which a prime contractor/recipient CBE will receive 25% of PIER funds and a subcontractor CBE will receive 25% of PIER funds, meets this 50% requirement.
3. The proposal must receive a passing score prior to any preference points being added.

The preference points will be awarded as follows:

<i>Score (prior to preference points being added)</i>	<i>Additional Points</i>
700-759	10
760-819	20
820-879	30
880-939	40
940-1000	50

The total possible points, not counting any preference points, for this solicitation is **1000**. The minimum passing score is **700** points. Each proposal that has a score of **700** points or more and qualifies for this preference will receive additional points based on the table above.

Applicants wanting to qualify for these preference points **MUST** fill out and submit with their proposal the CBE Preference Points form included as **Attachment J** in this solicitation.

ATTACHMENT J

CALIFORNIA-BASED ENTITIES PREFERENCE POINTS FORM

[The CBE preference points form for this solicitation is a separate Microsoft Word document. The template can be accessed at www.energy.ca.gov/contracts as part of this solicitation package.]

ATTACHMENT K**PREVAILING WAGE SPECIAL CONDITION TEMPLATE****PUBLIC WORKS AND PAYMENT OF PREVAILING WAGE****A. Recipient/General Requirements**

1. Recipient shall comply with state prevailing wage law, Chapter 1 of Part 7 of Division 2 of the Labor Code, commencing with Section 1720 and Title 8, California Code of Regulations, Chapter 8, Subchapter 3, commencing with Section 16000, for any “public works” (as that term is defined in the statutes) performed on the Project funded by this Agreement. For purpose of compliance with prevailing wage law, the Recipient shall comply with provisions applicable to an awarding body. Compliance with state prevailing wage law includes without limitation: payment of at least prevailing wage as applicable; overtime and working hour requirements; apprenticeship obligations; payroll recordkeeping requirements; and other obligations as required by law.
1. Recipient shall certify to the Energy Commission on each Payment Request Form, that prevailing wages were paid to eligible workers who provided labor for work covered by the payment request and that the Recipient and all contractors complied with prevailing wage laws.
2. Prior to the release of any retained funds under this Agreement, the Recipient shall submit to the Energy Commission a certificate signed by the Recipient and all contractors performing public works activities stating that prevailing wages were paid as required by law. The required certificate follows these special conditions.

B. Flowdown Requirements

Recipient shall ensure that all agreements with its contractors to perform work related to this Project contain the following provisions:

1. Contractor shall comply with state prevailing wage law, Chapter 1 of Part 7 of Division 2 of the Labor Code, commencing with Section 1720; and Title 8, California Code of Regulations, Chapter 8, Subchapter 3, commencing with Section 16000, for all construction, alteration, demolition, installation, repair or maintenance work over \$1,000 performed under the contract. Contractor’s obligations under prevailing wage laws include without limitation: pay at least the applicable prevailing wage for public works activities performed on the Project; comply with overtime and working hour requirements; comply with apprenticeship obligations; comply with payroll recordkeeping requirements; and comply with other obligations as required by law.

2. Contractor shall ensure that the above requirements are included in all its contracts and any layer of subcontracts for activities for the Project.

ATTACHMENT L**PREVAILING WAGE COMPLIANCE CERTIFICATE**

After the public works¹ activities funded by this Agreement are complete, Recipient must fill out and sign this certificate and obtain the signatures from all of its contractors and any layer of subcontractors involved in public works funded by this Agreement.

This certificate must be completed and submitted to the Energy Commission Project Manager prior to the release of the retained funds under this Agreement.

Recipient:

Energy Commission Agreement Number:

Date Public Works Completed:

Recipient hereby certifies as follows:

1. State prevailing wage law, Chapter 1 of Part 7 of Division 2 of the Labor Code, commencing with Section 1720 and Title 8, California Code of Regulations, Chapter 8, Subchapter 3, commencing with Section 16000, has been complied with for the “public works” (as that term is defined in the statutes) funded by this Agreement, including payment of at least prevailing wage as applicable; overtime and working hour requirements; apprenticeship obligations; payroll recordkeeping requirements; and other obligations as required by law.
2. All contracts and every layer of subcontracts involving public works funded by the above-referenced Agreement contained requirements that the contractor or subcontractor comply with prevailing wage law and pay prevailing wages in accordance with the requirements of the Labor Code.
3. The contractors and subcontractors have maintained labor records as required by the Labor Code and such records shall be made available upon request.
4. The undersigned Recipient acknowledges that disbursement of the retention by the California Energy Commission is expressly made in reliance upon the representations made in this certification.

¹ Public works is defined in Chapter 1 of Part 7 of Division 2 of the Labor Code, commencing with Section 1720.

Recipient:

Signature of Authorized Representative:_____

Printed/Typed Name:

Title:

Date:

Each contractor and subcontractor performing public works (e.g., construction, alteration, demolition, installation, repair or maintenance work) for the Project must sign below. Include additional pages if necessary.

Contractors and subcontractors hereby certify as follows:

1. The contract with the Recipient or the Recipient's contractor to perform work funded by the above-referenced Agreement contained requirements that the contractor and all its subcontractors comply with prevailing wage law and pay prevailing wages in accordance with the requirements of the Labor Code.
2. Prevailing wages have been paid as required by law.
3. Contractor and all its subcontractors have maintained labor records as required by the Labor Code and such records shall be made available upon request.
4. The undersigned acknowledges that disbursement of the retention by the California Energy Commission to the Recipient is expressly made in reliance upon the representations made in this certification.

Construction Contractor #1

Company Name:

Signature of Authorized

Representative:_____

Printed/Typed Name:

Title:

Date:

Construction Contractor #2

Company Name:

Signature of Authorized

Representative:_____

Printed/Typed Name:

Title:

Date:

Construction Contractor #3

Company Name:

Signature of Authorized

Representative:_____

Printed/Typed Name:

Title:

Date:

Construction Contractor #4

Company Name:

Signature of Authorized

Representative:_____

Printed/Typed Name:

Title:

Date:

Construction Contractor #5

Company Name:

Signature of Authorized

Representative:_____

Printed/Typed Name:

Title:

Date:

Construction Contractor #6

Company Name:

Signature of Authorized

Representative:_____

Printed/Typed Name:

Title:

Date:

ATTACHMENT M**PREVAILING WAGE COMPLIANCE QUESTIONS AND ANSWERS****1. Is Payment of Prevailing Wage Required?**

Yes. Any Recipient whose project involves “public works” as the term is defined in defined in Chapter 1 of Part 7 of Division 2 of the Labor Code, commencing with Section 1720, must pay prevailing wages in accordance with the law.

2. Does prevailing wage apply to private entities?

Yes. A private entity must pay prevailing wage under California law if the project involves public works.

3. How do I know if my project involves public works?

The California Labor Code beginning at section 1720 deals with this issue. Labor Code sections 1720 and 1771 define public works as:

- Construction (includes work performed during the design and preconstruction phases of construction including but not limited to, inspection and land surveying work).
- Alteration
- Demolition.
- Installation.
- Repair work.
- Maintenance work.

These Labor Code sections can be found online at <http://www.leginfo.ca.gov/calaw.html>.

Below are some examples (this list is not exhaustive) of the types of activities that typically lead to finding that a project is a public work:

- Cement work such as pouring a cement pad.
- Site preparation such as grading.
- Surveying.
- Electrical work such as wiring.
- Carpentry work.
- Limited inspection activities.

4. What kind of trades or workers must be paid prevailing wage?

The California Department of Industrial Relations (DIR) Division of Labor Statistics and Research (DLSR) makes the final determination on which trades and/or workers are covered by prevailing wage laws. DLSR maintains a list of the covered trades/workers that are entitled to prevailing wage for public works commercial construction projects. See www.dir.ca.gov/dlsr/statistics_research.html or call the DLSR Prevailing Wage Hotline (415) 703-4774 for more information about these trades.

Generally, workers such as the following would be covered trades:

- Operating engineer (heavy equipment operator)
- Surveyor
- Carpenter
- Cement Mason
- Electrician
- Laborer

The following types of workers usually would NOT be covered trades entitled to prevailing wage:

- Engineer
- Project superintendent / construction manager / project manager
- Architect
- Planner
- Computer programmer

The above examples are for general information only. If you have questions about whether a worker is in a covered trade requiring payment of prevailing wages, you should check directly with DIR.

5. What if I am unsure whether my project involves public works and prevailing wage must be paid? How Should I Budget if I am Unsure About Prevailing Wage?

You are encouraged to determine if your project involves public works as soon as possible. In order to determine if your project is a public work, you will need to contact the California Department of Industrial Relations (DIR). They can be reached at (415) 703-4774. If you do not know whether your project is a public work and you have not obtained a determination from DIR that the project is not a public work, you must budget with the assumption that the project is a public work and comply with the prevailing wage laws, including but not limited to the payment of prevailing wages.

On the budget, please indicate whether your budget includes amounts for the payment of prevailing wage. You must indicate “yes” unless you have received a determination from DIR that the project is not a public work.

If you do not budget for prevailing wage, and it is later determined that the project involves public works and prevailing wage must be paid, you may be liable for damages and penalties. You also cannot later increase your grant award if it is determined that prevailing wages apply and increase project costs higher than budgeted. The amount requested in your proposal is the maximum that will be paid. Any increased costs for payment of prevailing wage must be paid with match funds. The Energy Commission’s grant award amount does not change or increase if the applicant’s costs increase for any reason.

6. How do I get assistance in determining whether the project involves public works?

First, call the DLSR Prevailing Wage Hotline, (415) 703-4774. The Prevailing Wage Hotline can frequently give advice quickly on routine questions. If the Prevailing Wage Hotline is unable to answer your question, you will need to write to the Director of DIR for a coverage determination on whether your project involves public works. You would include all the relevant facts and documents related to the project. DIR regulations, Title 8 California Code of Regulations, section 16001(a)(1), provides that any interested party may file a request with the Director of DIR to determine coverage under the prevailing wage laws. The request can be either for a specific project or type of work to be performed that the interested party believes may be subject to or excluded from coverage as public works under the Labor Code. The full text of DIR’s regulations can be found at: <http://ccr.oal.ca.gov>, (Title 8, Division 1, Chapter 8, Subchapter 3, Article 2). Send requests for a coverage determination to:

Department of Industrial Relations
Office of the Director
455 Golden Gate Avenue
San Francisco CA 94102

7. How long will it take to get an answer?

We do not know, but hope that the question can be asked and answered informally and quickly through the Prevailing Wage Hotline. If you need to submit a request to the Director of DIR, it will take longer to get a coverage determination.

8. What happens if I make a request to DIR but do not have a decision, or am still unsure whether prevailing wage must be paid, by the time the Energy Commission makes an award at a business meeting, or by the time I execute the grant agreement?

In this case, the Energy Commission would execute a grant agreement with a budget that assumes prevailing wage is required. If the Recipient, prior to performing the activities in question, then receives a determination from DIR that the project is not a public work, then the Energy Commission can execute an amendment with the Recipient to decrease the budget accordingly. The prevailing wage terms and conditions can also be removed.

9. What if I submit a proposal to the Energy Commission with a project that I say is not a public work, and the Energy Commission believes that it might be a public work? How would we resolve our differences?

We would request that you first call the Prevailing Wage Hotline. If you do not receive an answer, we would request that you write a letter to DIR and ask DIR to make the decision. If DIR says the project is a public work, then you will need to pay prevailing wages. If you do not obtain a DIR determination that the project is not a public work requiring the payment of prevailing wage, then you must assume that the project is a public work and comply with the prevailing wage laws, including paying prevailing wages.

10. If my project is a public work, how do I know what prevailing wages are required in order to prepare a budget?

If your project is a public work, please submit your budget with the applicable prevailing wage for each trade entitled to prevailing wage as determined by DLSR. For prevailing wage rate information for commercial projects, see www.dir.ca.gov/dlsr/statistics_research.html or call the Prevailing Wage Hotline (415) 703-4774. If your project involves residential construction, the rates are not listed on DIR's website, and you must call the DLSR Prevailing Wage Hotline.

11. What do I do if workers will be used who do not fit neatly into one of the categories on the DIR website?

Contact DLSR and describe the type of trade you anticipate will be required in your project and ask whether there is an existing prevailing wage already set by DLSR.

12. Does prevailing wage apply to a public entity that performs project work with its own employees?

No.

13. If my project is considered a public work, then are there any special requirements?

Yes. For example, the grantee must make sure that covered workers are paid prevailing wage. There are other requirements, such as keeping payroll records, complying with working hour requirements, and apprenticeship obligations. See the Labor Code and the sample terms and conditions, Special Condition regarding Prevailing Wage.

ATTACHMENT N

PIER GRANT TERMS AND CONDITIONS

[The sample PIER grant terms and conditions for this solicitation is a separate portable document file (.pdf). The document can be accessed at www.energy.ca.gov/contracts as part of this solicitation package. Please note that the California Energy Commission reserves the right to modify these terms and conditions prior to issuing funding awards.]

ATTACHMENT O

RECENT DEMONSTRATION PROJECTS FUNDED BY THE IAW PROGRAM

[**Attachment O** is a separate Microsoft Word document. It can be accessed at www.energy.ca.gov/contracts as part of this solicitation package.]